



AF 12877

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Rosalie A. Centeno
Rosalie A. Centeno Secretary

In the Application of Rolf Hertling et al

Ser.No.: 09/831,842

Filed: May 11, 2001

For: METHOD FOR DETERMINING THE THICKNESS OF A MULTI-THIN-LAYER STRUCTURE

Commissioner of Patents

Alexandria, Virginia 22313-1450

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INFORMATION DISCLOSURE STATEMENT

In accordance with 37 CFR § 1.56, Applicant wishes to call the attention of the Examiner to the following references:

- 1) JP 2000-310512

Reference 1, JP2000310512, discloses the following:

PROBLEM TO BE SOLVED: To accurately measure the film thickness and the distribution of film thickness without influence of a base pattern by optically obtaining a film thickness of a transparent film according to the frequency and phase of spectral waveform of a detected reflection light.

SOLUTION: A light reflected on a wafer passes through an iris focus 10 and a lens 9, and its optical path is changed through a beam splitter 8 and enters a diffraction grating

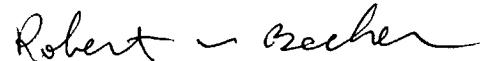
11, A light splitted spectrally by the diffraction grating 11 is formed on a detector 12, and its spectral intensity distribution 15 can be obtained. The reflection light produces an interference due to a film to be measured, and it has a distribution of spectral intensity corresponding to the structure within a film. The distribution of spectral intensity is subjected to film-thickness calculation processing such as correction and frequency analysis, etc., so as to obtain a film thickness. A light source having a wide wavelength band range such as a tungsten halogen lamp, a xenon lamp, etc., is preferably used as a white light source 6. A laser light with a plurality of different wavelengths may be also used. A CCD two-dimensional sensor or a one- dimensional line sensor may be used as a detector 12.

A copy of the listed document is submitted herewith along with the form PTO-1449.

It is respectfully requested that any fees required and not enclosed herewith or any shortages in any fees be charged to Deposit Account 02-1653.

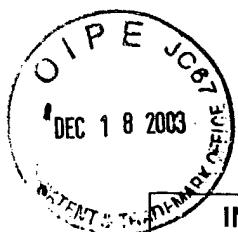
Consideration of the foregoing in relation to this application is respectfully requested.

Respectfully submitted,



Robert W. Becker, Reg. No. 26,255
for the Applicants
Robert W. Becker & Associates
707 Hwy 66 East, Suite B
Tijeras, NM 87059
Telephone: (505) 286-3511
Telefax: (505) 286-3524

RWB/rac
Enclosures



INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Compl t if Known	
		Application Number	09/831,842
		Filing Date	May 11, 2001
		First Named Inventor	Rolf Hertling
		Group Art Unit	
		Examiner Name	
		Attorney Docket No.	AZ.2657

U. S. PATENT DOCUMENTS							
Examiner Initials	Cite No.	Patent Number Pub. Number	Issue Date Pub. Date	Patentee	Class	Subclass	Filing Date

FOREIGN PATENT DOCUMENTS							
Examiner Initials	Cite No.	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation
							Yes <input type="checkbox"/> No <input type="checkbox"/>
1		JP2000310512	07 Nov 2000	Japan			X

OTHER PRIOR ART & NON PATENT LITERATURE DOCUMENTS		
Examiner Initials	Cite No.	

Examiner		Date	
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12/12/2003